What is claimed is:

1.   1.   A method for use in a wireless communication system, comprising:

2.   determining symbol error rates for antennas in a group of antennas; and

3.   selecting an antenna from the group of antennas for use in subsequent wireless

4.   communication based on the symbol error rates.

1.   2.   The method of claim 1, wherein:

2.   selecting an antenna includes selecting an antenna that has a lowest symbol error

3.   rate.

1.   3.   The method of claim 1, wherein:

2.   said symbol error rates include average symbol error rates.

1.   4.   The method of claim 3, wherein:

2.   said wireless communication system is a multicarrier system; and

3.   said average symbol error rates are averaged over a plurality of sub-carriers.

1.   5.   The method of claim 4, wherein:

2.   determining symbol error rates includes determining an average symbol error

3.   rate for a first antenna by summing symbol error probabilities corresponding to multiple

4.   sub-carriers associated with said first antenna.

1.   6.   The method of claim 4, wherein:

2.   determining symbol error rates includes determining an average symbol error

3.   rate for a first antenna by estimating a sum of symbol error probabilities corresponding

4.   to multiple sub-carriers associated with said first antenna using an error probability

5.   between two closest signal constellation points.

1   7.   The method of claim 4, wherein:

2   said wireless communication system uses orthogonal frequency division

3   multiplexing (OFDM).

1   8.   The method of claim 3, wherein:

2   said wireless communication system is a code division multiple access (CDMA)

3   based system; and

4   said average symbol error rates are averaged over a plurality of codes.

1   9.   An apparatus comprising:

2   an antenna switch to controllably couple one of a plurality of antennas to a

3   wireless communication circuit; and

4   a switch controller to select an antenna from said plurality of antennas to be

5   coupled to said wireless communication circuit for use in supporting wireless

6   communication based on symbol error rates associated with antennas in said plurality of

7   antennas.

1   10.   The apparatus of claim 9, wherein:

2   said switch controller includes an error estimator to estimate said symbol error

3   rates associated with said antennas.

1   11.   The apparatus of claim 9, wherein:

2   said symbol error rates are average symbol error rates.

1   12.   The apparatus of claim 11, wherein:

2   said wireless communication circuit supports multicarrier communication; and

3   said average symbol error rates are averaged over a plurality of sub-carriers.

1   13.   The apparatus of claim 12, wherein:

2   said switch controller includes an error estimator to determine an average

3   symbol error rate for a first antenna by summing symbol error probabilities

4   corresponding to multiple sub-carriers associated with said first antenna.

1   14.   The apparatus of claim 11, wherein:

2   said wireless communication circuit supports code division multiple access

3   (CDMA); and

4   said average symbol error rates are averaged over a plurality of codes.

1   15.   The apparatus of claim 9, wherein:

2   said switch controller generates a switch control signal for said antenna switch.

1   16.   The apparatus of claim 9, wherein:

2   said switch controller selects an antenna having a lowest average symbol error

3   rate.

1   17.   The apparatus of claim 9, wherein:

2   said wireless communication circuit includes a wireless transmitter.

1   18.   The apparatus of claim 9, wherein:

2   said wireless communication circuit includes a wireless receiver.

1   19.   The apparatus of claim 9, wherein:

2   said wireless communication circuit includes a wireless transceiver.

1   20.   A system comprising:

2   a plurality of antennas that includes at least one dipole antenna;

3   an antenna switch to controllably couple one of said plurality of antennas to a

4   wireless communication circuit; and

5   a switch controller to select an antenna from said plurality of antennas to be

6 coupled to said wireless communication circuit for use in supporting wireless

7 communication based on symbol error rates associated with antennas in said plurality of

8 antennas.

1 21.   The system of claim 20, wherein:

2   said switch controller includes an error estimator to estimate said symbol error

3 rates associated with said antennas.

1 22.   The system of claim 20, wherein:

2   said symbol error rates are average symbol error rates.

1 23.   The system of claim 20, wherein:

2   said wireless communication circuit supports multicarrier wireless

3 communication; and

4   said average symbol error rates are averaged over a plurality of sub-carriers.

1 24.   The system of claim 20, wherein:

2   said wireless communication circuit supports code division multiple access

3 (CDMA); and

4   said average symbol error rates are averaged over a plurality of codes.

1 25.   The system of claim 20, wherein:

2   said system is part of a wireless access point.

1 26.   The system of claim 20, wherein:

2   said system is part of a wireless network interface card (NIC).